

REMARKS

After entry of the present amendment, claims 1-7 and 27-42 are pending in the application. Claims 1-4, 27-34, and 38-42 are rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling. Claims 1-7 and 27-42 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Claims 1-7 and 27-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lait (1993) 73, 381-388 ("Gupta 1993"). Claims 1-7 and 27-42 stand rejected as being unpatentable over US 5,750,177 ("Yee").

Applicants submit herewith a Supplemental Declaration of Dr. Isabelle Laye ("the Supplemental Dr. Laye Declaration") and a Declaration of Dr. Fui Mei ("the Dr. Mei Declaration") in support of this response. Applicants respectfully request reconsideration and allowance in view of the discussion herein.

I. Claims 1-4, 27-34, and 38-42 are Enabled Based on the Original Disclosure Because an Emulsifier is Only Disclosed as Being a Typical Ingredient

The Office Action states that claims 1-4, 27-34, and 38-42 are based on a disclosure that is not enabling because "[a]n emulsifier critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure." (Office Action, p. 2.) Applicants respectfully disagree. To the contrary, the original specification actually states just the opposite on page 8, line 19: "Typically, the process cheese further comprises an emulsifier." (Emphasis added.) Therefore, there is no support in the specification for the Office Action's contention that an emulsifier is critical. Rather, an emulsifier is described as only one ingredient in a typical processed cheese, but nowhere in the specification is the emulsifier described as critical. Nevertheless, independent claim 27 and dependent claims 28-32 do indeed define the process cheese as containing an emulsifier.

II. Claims 1-7 and 27-42 are Enabled Based on the Original Disclosure Because Melting Point is Described as Being the Same as Softening Point, Which are Both Measured by a Mettler Dropping Point Furnace

The Office Action states that claims 1-7 and 27-42 are rejected because “Applicant does not clearly teach or define whether the claimed temperatures are softening temperatures or melting temperatures, nor does the Applicant distinguish between the two temperatures.” (Office Action, pg. 3.) Applicants’ respectfully disagree. The specification expressly states on page 13, line 29 to page 14, line 4 that softening point is the same as melting point and both are measured by a Mettler Dropping Point Furnace, which more than clearly defines what is intended by this term and how one of ordinary skill would measure such temperature:

Softening points were determined using a Mettler FP-83 Dropping Point Furnace and as Mettler FP-80 Processor Good quality process cheese generally has a . . . softening or melting point of about 105 to about 150°F

(Specification, p. 13, line 29 to p. 14, line 4, emphasis added.)

It is also noted that the relied upon reference US 5,750,177 (“Yee”) also measures melting points using the same Mettler Dropping Point system, which plainly shows that such temperature measurement is well understood by one of ordinary skill. (See Yee, Col. 8, line 40 to Col. 9, line 20.) In addition, the Supplemental Dr. Laye Declaration also confirms that melting point and softening point are described in the specification as synonymous terms and defined based on the measurement of the Mettler Dropping Point System. (Supplemental Dr. Laye Declaration, ¶ 5.)

III. Claims 1-7 and 27-42 are Not Obvious Over Gupta 1993 Because the Processed Cheese Described by Gupta 1993 Fails to Exhibit the Claimed Melting Points

The Office Action stated claims 1-7 and 27-42 show that “[i]t would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to adjust the whey to casein ratio as taught by Gupta et al and as is claimed because the manipulation of the casein to

wey ratio is well-known in the art.” (Office Action, p. 3.) Applicants respectfully disagree because Gupta 1993 fails to disclose the claimed melting points.

As demonstrated in the attached Declaration of Dr. Fui Mei, the processed cheese described in the Gupta 1993 reference does not exhibit the claimed melting points even when it has a casein-to-wey ratio within the range defined by the claims. (Mei Declaration, ¶ 29.) As explained by Dr. Mei in her Declaration, Gupta 1993 describes the effect of melting quality on processed cheeses with added amounts of wey protein concentrate on page 386 and in FIG. 3 of the Gupta 1993 reference. (Mei Declaration, ¶ 5.) Dr. Mei also notes that the Gupta 1993 reference does not measure cheese melting point directly, but indirectly measures “melting quality” through a relative decrease in cheese height upon heating. (*Id.*) Therefore, to directly compare the cheese described by Gupta 1993 and the claimed cheese, the Applicants duplicated the processed cheese of the Gupta 1993 reference and measured the melting points using the same Mettler Dropping Point system as described in the present specification. (*Id.* at ¶ 6.)

In her Declaration, Dr. Mei explains the procedures for duplicating the Gupta process cheeses and the evaluation of their melting points based on the Mettler Dropping Point test. (*Id.* at ¶¶ 7-29.) The cheese described by the Gupta 1993 reference with a 20 percent replacement of WPC did have a casein to wey ratio of 1.7:1, but this cheese did not even melt using the Mettler Dropping Point furnace—meaning the melting point of this Gupta 1993 cheese was above 212°F, which is substantially above the claimed range of about 105 to about 105°F. (*Id.* at ¶¶ 28-29.) The other cheeses described by Gupta 1993 did not have casein-to-wey ratios within the claims. (*Id.* at ¶¶ 28-29.)

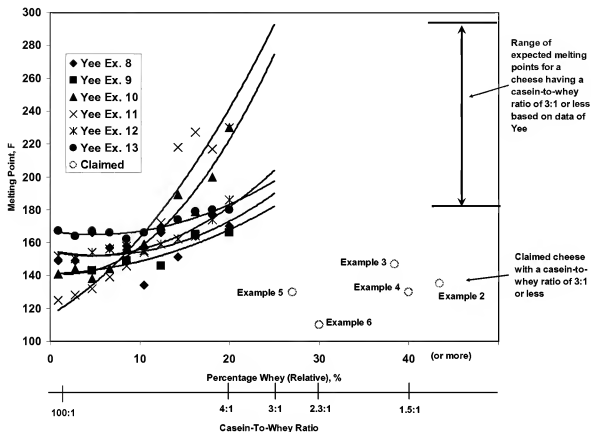
Therefore, Gupta 1993 can not render claims 1-7 and 27-42 obvious because it does not disclose or suggest all claim features; namely, the Gupta 1993 reference does not disclose or suggest a processed cheese having a casein-to-wey ratio between 1:1 to 3:1 and also having a melting point defined by a Mettler Dropping Point system between 105 and about 150°F.

IV. Claims 1-7 and 27-42 are Not Obvious Over US 5,750,177 ("Yee") Because Yee Also Fails to Describe a Process Cheese Having a Casein to Whey Ratio Less than 4:1 and Fails to Suggest Melting Points Between About 105 and About 150°F.

The Office Action continues to suggest claims 1-7 and 27-42 are obvious over Yee and dismissed the previous Declaration of Dr. Isabelle Laye submitted in the last response because it "does not explain from where these melting points are obtained." (Office Action, pp. 4-5.) Therefore, Applicants' provide a supplemental Declaration of Dr. Isabelle Laye that provides exact details of where the inventive melting points are located in the present specification and includes a revised melting point/casein-to-whey chart comparing the data of Yee to the claimed cheese. (Supplemental Dr. Laye Declaration, ¶¶ 6-9.)

As explained again by Dr. Laye, if the data of Yee were used to predict the melting points of cheese having a casein to whey ratio less than 4:1, Yee indicates that such melting points would be expected to be between 180°F and 290°F, which are far outside the range claimed. (*Id.*) This supplemental declaration shows in paragraph 7 (Table 1 and Fig. 1), exactly which inventive Examples and exactly where in the specification the inventive ratios can be obtained, which provides support in the original declaration and commensurate in scope with the claims.

Rather than repeating the discussion from the previous response, this supplemental Declaration of Dr. Laye is meant to be considered together with the previous Declaration of Dr. Laye and with the previous response, which are both incorporated herein by reference. A copy of the updated chart from the Supplemental Dr. Laye Declaration is attached below for reference showing that the data of Yee predicts melting points (which are measured using the same Mettler dropping point system as in the present application) far outside those claimed.



V. Conclusion

Reconsideration and allowance of claims 1-7 and 27-42 are respectfully requested as none of the cited references either alone or in combination disclose or suggest the claimed melting points in a processed cheese having the defined casein-to-whey ratios. All that the cited prior art references demonstrate is that increasing the amount of whey in processed cheese results in an increased melting point. The claimed processed cheese, on the other hand, does indeed show unexpected results because the claimed melting points are much lower than expected from either Gupta 1993 or Yee as demonstrated in the three declarations provided in this and the last response.

The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,
FITCH, EVEN, TABIN & FLANNERY

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